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Park Falls mill wins \$30 million biofuel grant

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Flambeau River Biofuels (FRB) of Park Falls has been awarded a grant of up to \$30 million to construct a cutting edge biorefinery at the Flambeau River Paper Mill.

The state-of-the-art production facility will produce some 40 million gallons a year of sulfur-free Fischer-Tropsch liquid, a transportation fuel similar to diesel with many characteristics superior to light, sweet crude oil.

A byproduct of the fuel-making process will be a variety of waxes that can be used in products such as renewable lubricants and even candles.

According to Flambeau River spokesman William Johnson Jr., the new business will be a model of low-cost, environmentally friendly biofuel production, which uses neither food materials nor merchantable timber, but rather employs "forest residue" - felled upper branches, bark, sawdust and other materials that are ordinarily landfilled or left to rot in the woods.

"It uses a process that the Germans created back in the 1920s; they were gasifying coal, where they were able to separate the hydrogen and carbon molecules and through catalysts bond the molecules to produce transportation fuels and waxes," he said.

The process will also create some two trillion BTUs of heat that will enable Flambeau River Paper to eliminate its dependence on natural gas, a prospect that will make the mill far more competitive and profitable. It is the high usage of natural gas for process heat that is a major cost factor in papermaking, and a cost that drove the mill's former owner, SMART Paper of

Ohio, into bankruptcy.

The successful grant application was the third effort on the part of Flambeau River to get funds to create a biofuels plant at the paper mill site. Both of the previous efforts have involved the proposed production of cellulosic ethanol from wood waste. Johnson said the switch in the final product was the result of a decision to use a different technology.

“When we were talking about cellulosic ethanol, we were talking about putting in a new pulp mill under the paper mill site and just separating the sugars out and fermenting the sugars,” Johnson said, noting that like the current plan, a gassifier was part of the project, to take all the byproducts that couldn't be used for making ethanol and burn it for energy. However, as they studied the process, it became clear to company officials that it would be simpler and more efficient to use the German process to produce the diesel-like product.

One of the advantages is that the Fischer-Tropsch process can use virtually any woody products, and not just certain species, like pine, that are required by the ethanol process.

“We could use tops and branches and everything else instead of just round wood that we would be competing with lumber and paper mills for,” Johnson said. “It really allows us to not disrupt the wood market as bad as would have been. We will be able to go to the top 25 percent of the tree that is left in the woods, to the sawmills and take their slab wood, to use sawmill fines, sawdust, just a plethora of different feed stocks that will be able to go into our new process.”

The new product will be at least as valuable as the ethanol that would have been produced by the Park Falls Mill, Johnson said.

“Diesel fuel prices are skyrocketing worse than gasoline, and on the other side of it, the process gives us so much excess heat and hot water and steam that we will be able to capture it and pipe that back to the pulp and paper mill and replace our natural gas using just the excess energy coming off this process and make Flambeau Papers the first integrated paper mill in North America to be fossil fuel-free,” he said.

The process of making the estimated 40 million gallons of Fischer-Tropsch fuel liquid will also use far less water than ethanol production would have entailed. Ethanol production would have required 18 gallons of water to produce one gallon of ethanol, while the synthetic fuel produced by the Fischer-Tropsch process will only use 1.56 gallons of water to produce a gallon of fuel. The process will also eliminate 859,000 tons of carbon dioxide a year as compared to the petroleum it replaces - the amount produced by nearly a million barrels of petroleum, and at a price of under a dollar a gallon, a FRB project synopsis said.

“It's truly a very environmentally friendly way to help the country hopefully start on the path of reducing our dependence on Middle Eastern oil,” Johnson said. “Looking at the efficiency, this is really hands down the way to go,” he said.

Citigroup is leading the project financing on the estimated \$300 million project.

"This is an investment the size of Lambeau Field," Johnson said. "It's one we are certainly willing to take on to make Flambeau River Papers that much more sustainable."

Johnson said he believed FRB is "leading the charge" into a new era for both energy production and the paper-making industry.

"It's going to make us more competitive in the global paper market we are faced with," he said.

Congratulations and applause on the grant has been swift upon the news of the grant.

Wisconsin Seventh District Congressman Dave Obey (D-Wausau) said the grant was "good news for all of northern Wisconsin and it will be good news for the country as we try to move from fossil fuels to new types of energy."

State Representative Mary Williams (R-Medford) was also elated by the announcement.

"This is fantastic news," Williams said. "It's been a long journey from the closing of the mill in spring of 2006, to its reopening months later, to the state funding for the bio-refinery to help make the operation sustainable long-term, and now to the federal funding that will complete the package."

Johnson said the final size of the funding package would be negotiated next month in Golden, Colo.

"It's our full intention to go in there and we are gunning for the full amount of our application, \$30 million," he said.

Johnson said the funding "put the stamp of approval" on the project, making it much more attractive for outside investors who will be needed to complete the project's financing.

"It goes a long way to telling the investors that we will be looking for that this is a project worth investing in, and one that is going to be a great model going forward," Johnson said. "It gives us a great opportunity to have a sustainable paper mill in Park Falls and a sustainable business model for people who want to reduce the use of natural gas and dependence on Middle Eastern oil."